Military Shelters

TECHNICAL MANUAL

Marconi
Radar Systems

CONCLUSIONS

It is obvious that this whole subject of EMP protection has far reaching consequences for everyone.

From what has been said so far, it can be seen that a deliberate detonation of a nuclear weapon to maximise the EMP effect could and probably would occur in any future conflict. This could affect countries not even involved in the conflict itself.

The probable effects of EMP exposure would mean telephone communications would be knocked out in most, if not all parts of the country. Landline and repeater equipment would be destroyed and rendered useless. Radio communications would be impossible, VHF broadcast receivers and mobile VHF equipment would be severely damaged. HF transmitter and receiver units would be useless, especially the widely used broadband radio and radar equipment. Mains power supplies would also be damaged.

In essence then, electronic communication and power supplies would cease to exist once an exo-atmospheric blast which produces a significant EMP has taken place. It is popularly supposed that this would be a temporary situation, but this is not the case and wide spread and immediate destruction of equipment would occur, which would take extensive repairs to correct. It is a sensible precaution to protect strategically important systems. The Marconi shelter range offers a cost-effective way of doing it.

Shelter A.C. supply

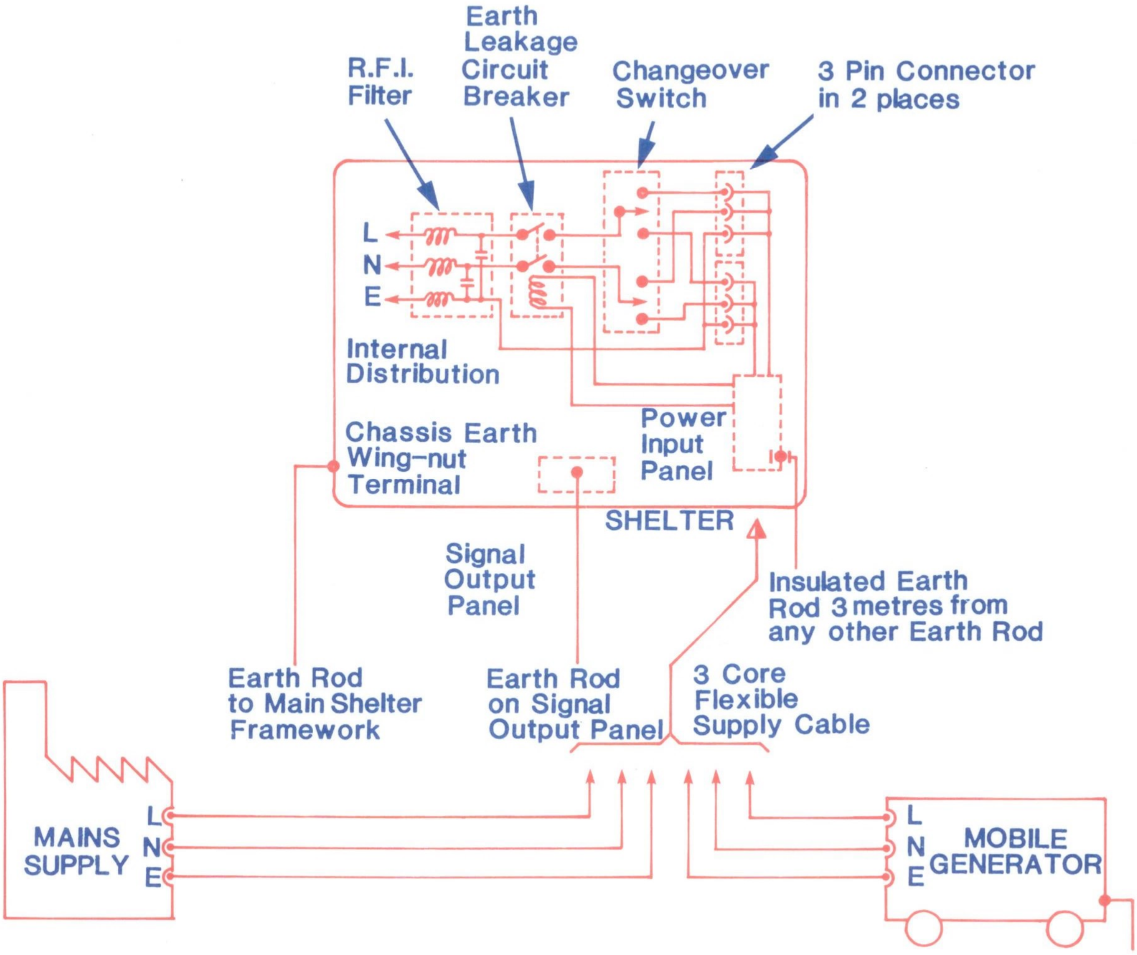

Earth Leakage Circuit Breaker
R.F.I. Filter
Changeover Switch
3 Pin Connector in 2 places
L
N
E
Internal Distribution
Chassis Earth Wing-nut Terminal
Power Input Panel
SHELTER
Signal Output Panel
Insulated Earth Rod 3 metres from any other Earth Rod
Earth Rod to Main Shelter Framework
Earth Rod on Signal Output Panel
3 Core Flexible Supply Cable
MAINS SUPPLY
L
N
E
L
N
E
MOBILE GENERATOR

FIG.400

Shelter D.C. supply

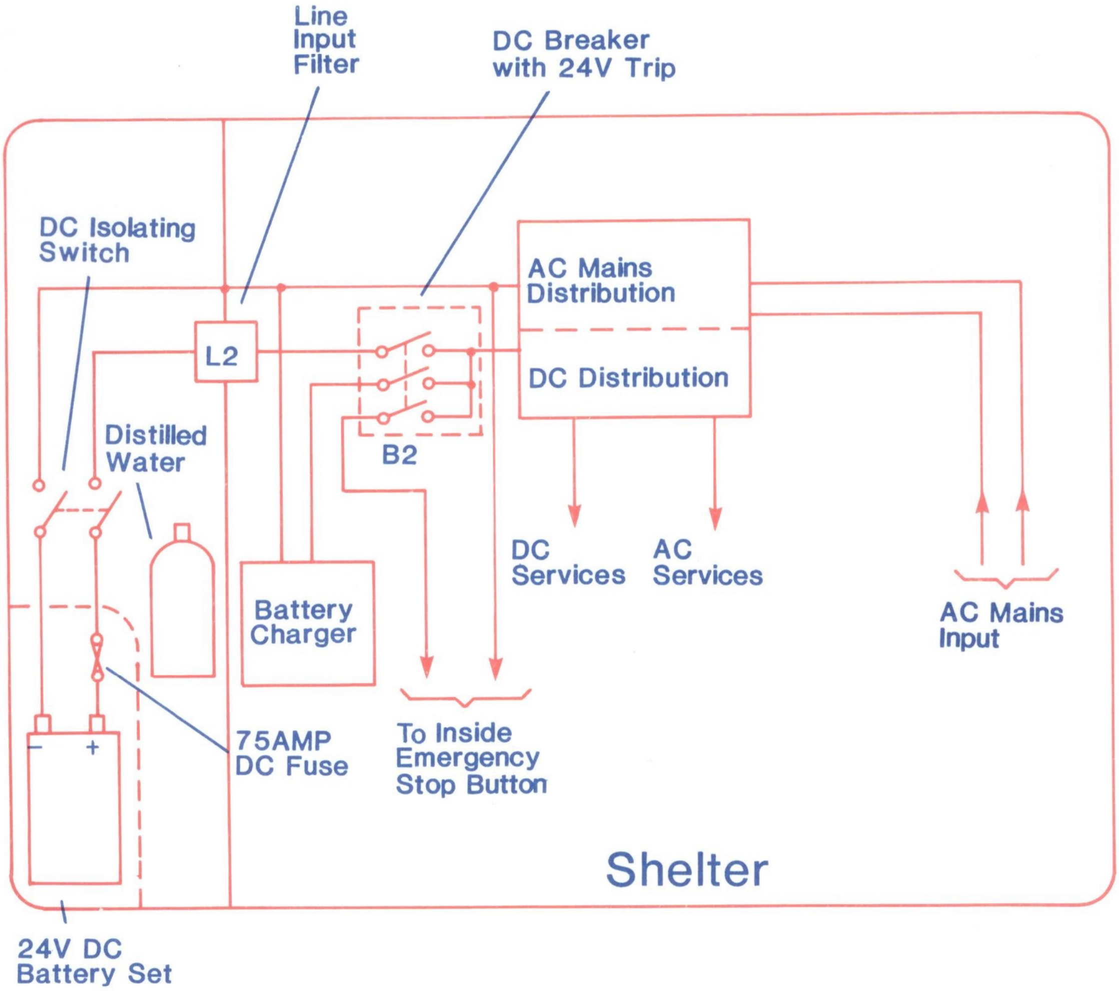
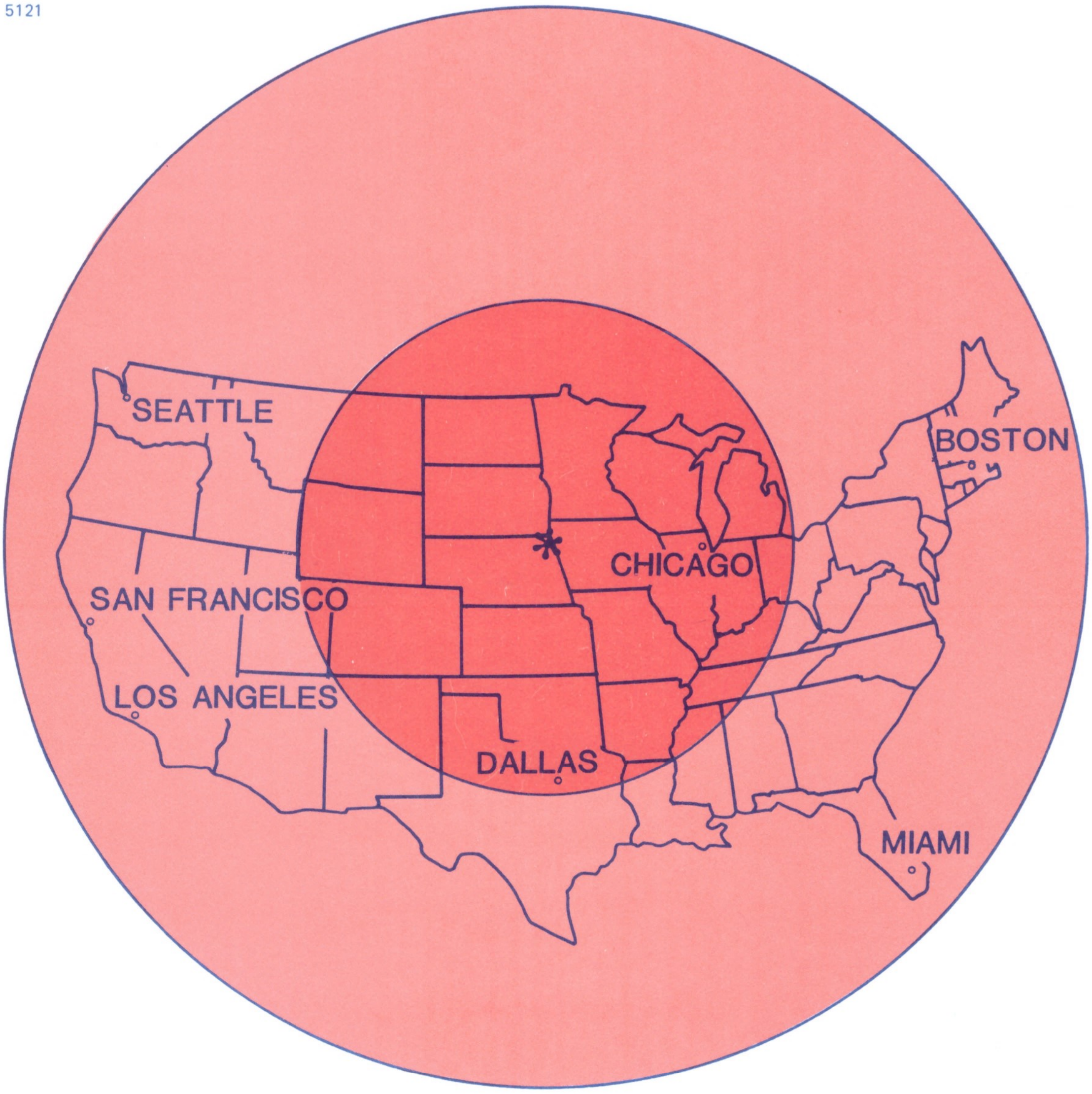


FIG. 410

E.M.P. blanket area for nuclear burst at 50 mile and 120 mile heights

5121



* POSITION OF NUCLEAR BLAST

INNER CIRCLE – COVERAGE IF DETONATED AT A HEIGHT OF 50 MILES

OUTER CIRCLE – COVERAGE IF DETONATED AT A HEIGHT OF 120 MILES

FIG. 560

One megaton burst over the North Sea

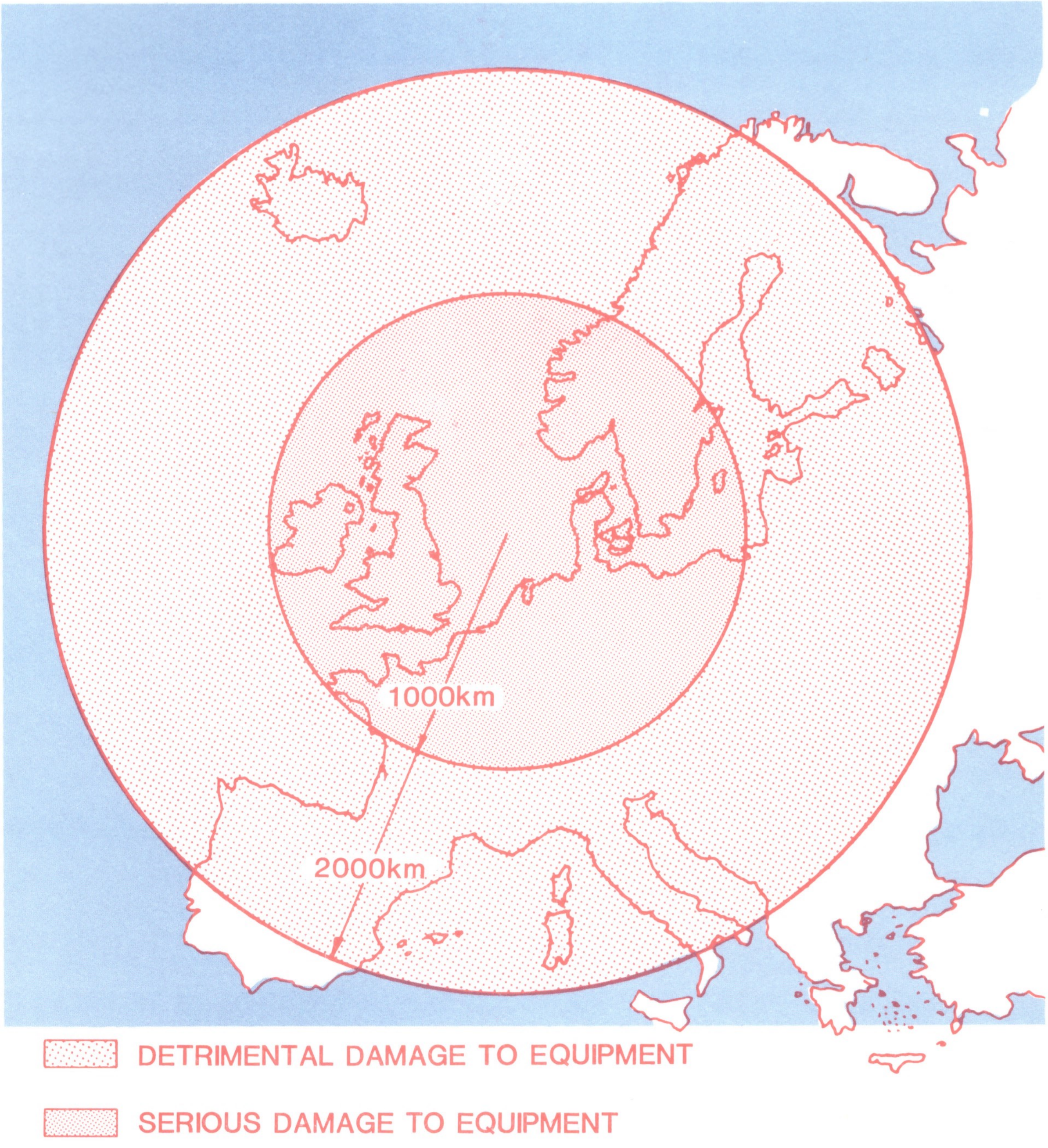


FIG. 550

E.M.P. energy collectors

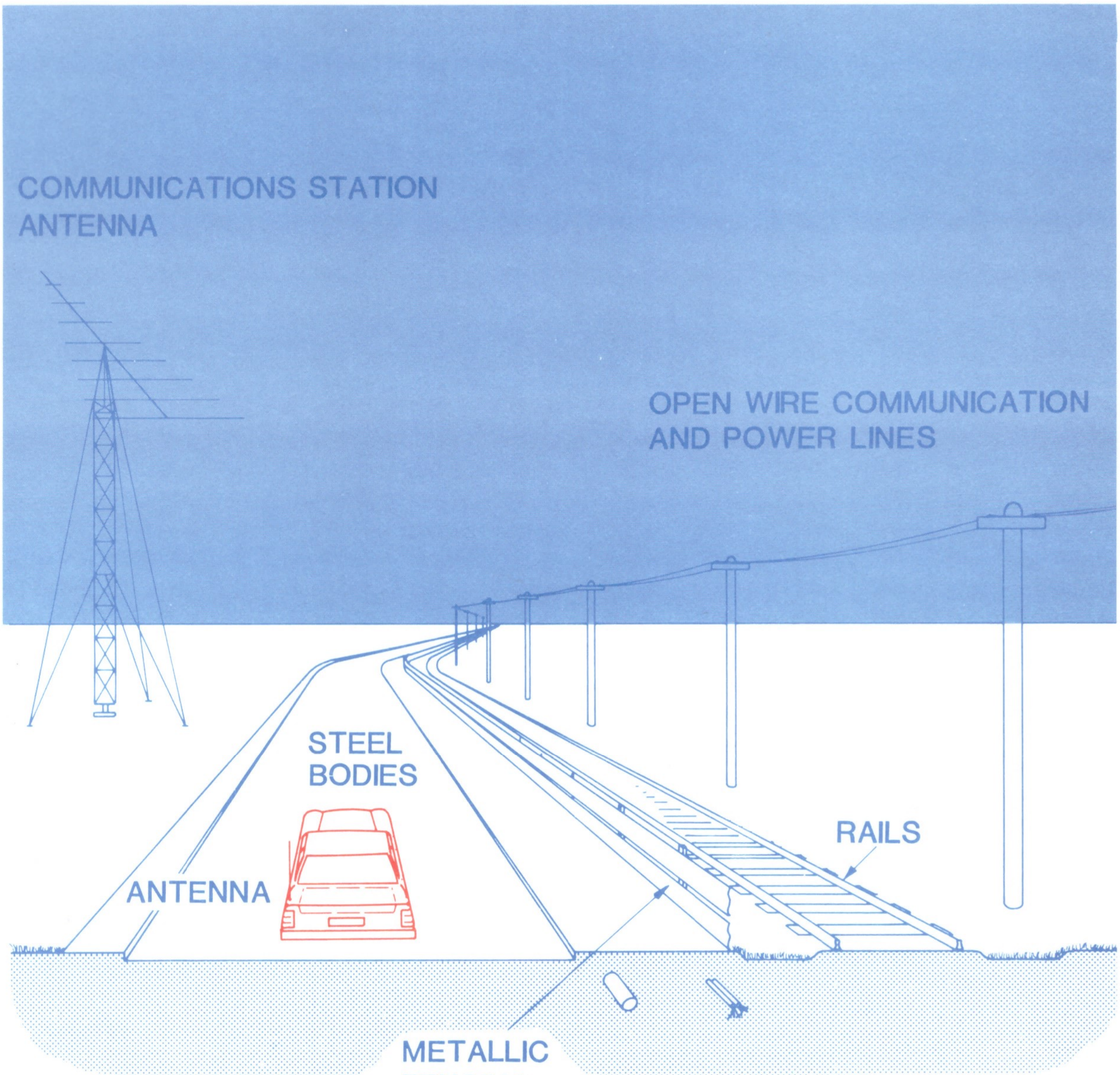


FIG. 590

Frequency spectrum comparison

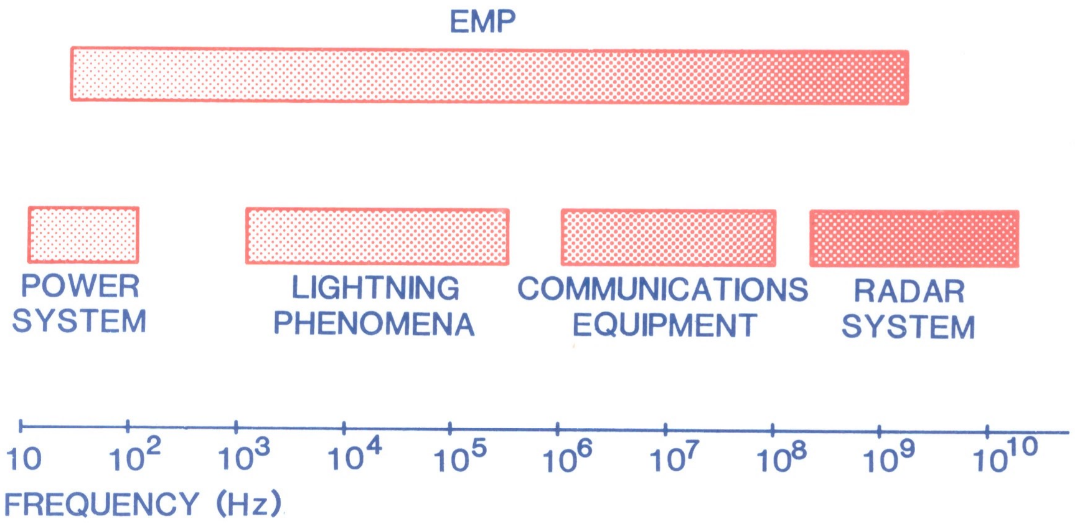


FIG. 570

Field strength produced by one megaton ground burst

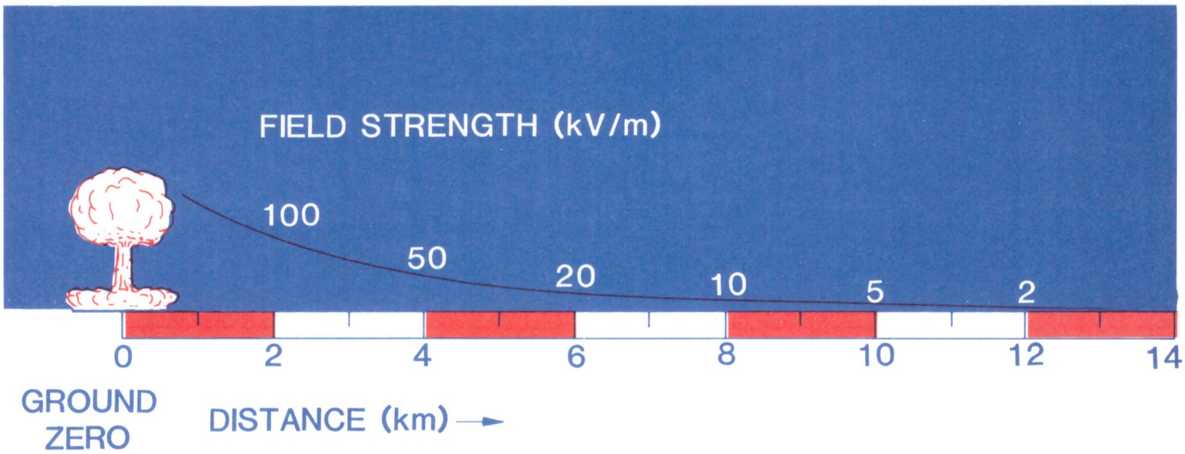


FIG. 530

Timescale of nuclear burst effects

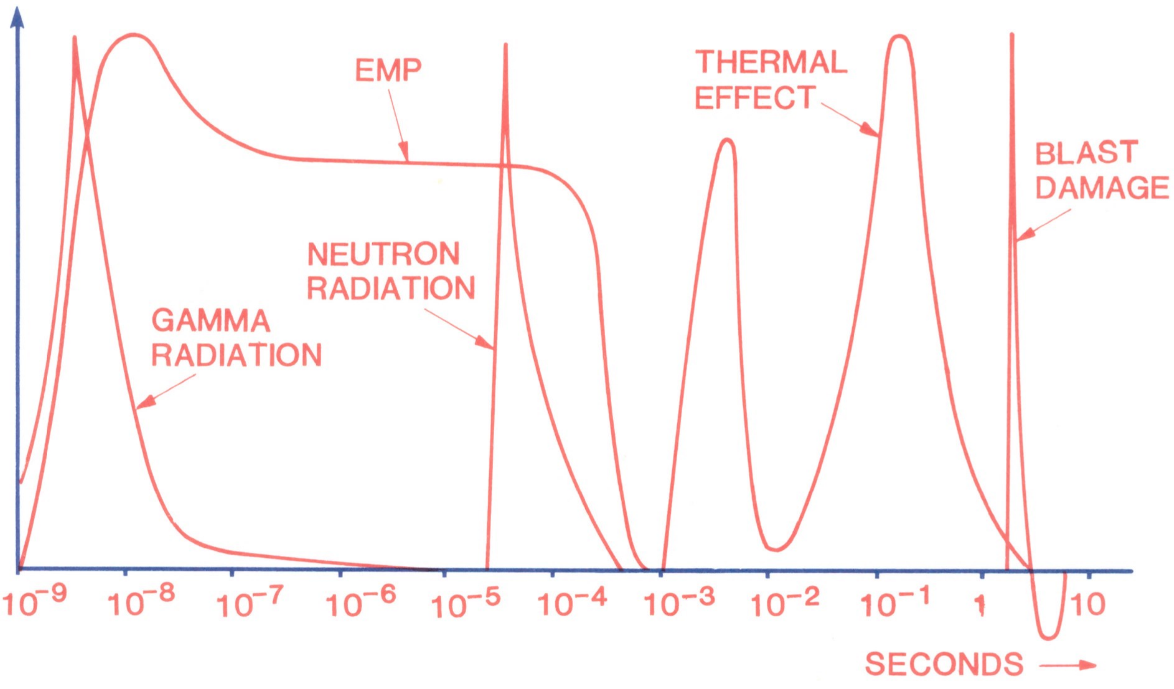


FIG. 510